

## ABSTRACT OF THE DISCLOSURE

The present invention provides an immunocontraceptive vaccine comprising a recombinant bacterial host that has been  
5 modified to produce egg- or sperm-specific polypeptide such as the sperm-specific protein lactate dehydrogenase-C (LDH-C). When animals such as rodents eat these bacteria, their immune systems produce antibodies that attack their sperms. Not only would the males have less viable sperm, the females would also have  
10 antibodies to sperm entering their reproductive systems. Immunocontraception is an attractive method for reducing the population size of animals with high fecundity, and sterilizing animals using such immunocontraceptives can reduce targeted animal populations to acceptable levels in an efficient, cost-  
15 effective, humane and, importantly, a species-specific manner.